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ABSTRACT

The relationship between turn-regulation, the phonetic features of pitch, and loudness is examined in a study of two recorded natural conversations in Akan. Analysis of patterns in turn-delimitation suggests that (1) diminuendo loudness, a low pitch height, and falling pitch movement are treated by turn-occupants and their co-participants as turn-delimitative; (2) if by chance the next speaker does not orient to turn delimitation done with the above phonetic features, the turn-occupant calls the next speaker's attention to it; and (3) loudness and pitch are valuable turn-regulation signals. These patterns are then considered in cases of speech overlap. It is concluded that close and systematic attention to the relationship between overlap and the phonetic features of pitch movement and loudness could further illuminate turn regulation. A brief bibliography is included. (MSE)

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PITCH, LOUDNESS AND TURN REGULATION IN AKAN CONVERSATION

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1 Introduction

In an earlier paper on Conversational Strategies (Obeng 1989), I noted in passing that pieces of stretches of talk making up the end of a current speaker's turn often co-occur with portions of either lento or rallentando tempo and a simultaneous rall-syllable-timed rhythm and a falling pitch movement. Specifically I suggested that falling pitch movement may also be turn-delimitative.

My main concern in this paper is to attempt to throw more light on a hitherto 'not-so-much-explored' area of conversational phonology: that of the relationship between turn regulation and the phonetic features of pitch and loudness.

To help validate and to make more explicit the relationship between turn regulation and each of the above-mentioned phonetic features, I have devoted some space to dealing with the correlation between each of the phonetic features and one interactive category termed in the literature interruptive (or overlapping) talk.

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2 Methodology

Methodologically, I adopt the inductive approach to linguistic analysis. I rely heavily on the strategies employed by Conversational Analysts, notably Sacks, Schegloff and Jefferson (1974).

Within the inductive approach to linguistic analysis statements made are not based on the analyst's intuition as a native speaker of the language under investigation but are rather arrived at inductively from empirical data — usually natural conversations — and are shown to be relevant for the interactants themselves. Detailed phonetic transcripts of relevant portions of my data are placed alongside my analytical claims to help explicate the logic of the interpretations of these claims.

Interactants' orientations to the turn-regulation signals are also brought to light.

Finally, statements and/or claims made are based on my entire corpus and not just upon the extracts which will be drawn from it.

3 Data

The data for this study consists of transcripts of two tape-recorded natural conversations of twenty-five minutes each. All the conversations were recorded without the knowledge of the conversational participants. Orthographic transcriptions were first made of the conversations. This was then followed by detailed impressionistic transcriptions of relevant portions. To help anonymize the interactants, only their initials have been placed next to their utterances. Utterances whose perceptibility is reduced by excessive noise or a marked falling off in loudness were not transcribed.

4 Discussion

The first observation I put forward relates to turn-delimitation and is stated as: the last few bits ending a current turn-occupant's turn co-occur with diminuendo or piano loudness and with simultaneous low-level pitch height or a falling pitch movement (FPM) in which the descent in pitch more or less reaches the bottom of the speaker's pitch range.

Extracts 1 to 3 below are just three instances of the many such cases that help illustrate this.

EXTRACT 1

AY: Nà ɔ̀bɔ̀nsáḿ yé déń béhá wó?
nɔ bɔnsam je déíbɛ ha
< >—»

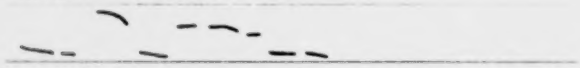
BO: À à màhú nèà éhá wò nò
a məhu nɪɛ ha nɔ

AY: èdéé béń nà èhá mè
edɪɛ bɛ nɛ ha mɪ
forte >—→

AY: How can the devil bewitch you?
BO: Ah! I now see your problem!
AY: What is it (my problem)?

EXTRACT 2

KA: màǹhù nó óò, ná yèse ɔ̀kɔ́ Òkyíńsó
mənhu no: nɪɛ sloko tʃinsɪ (0.6)
norm forte >⟶>



AB: Éèì! Nàná né nè Kóòkóò àsɛ́ḿ yí dèè
ei nana nɪ ni ko:k^{h}wa:s e mi: dɪɛ
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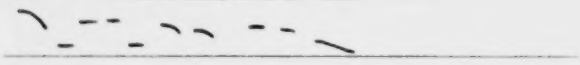
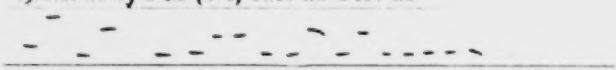


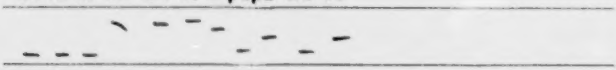
KA: I didn't see her. They said she had by then travelled to Okyinso.
AB: Ei! Nana and her Cocoa!

EXTRACT 3

AY: ɛ̀ǹyɛ́ òbí nà ɔ̀kyéré Ò ɛ̀hɛ́è ɛ̀nó dèè ɛ̀wɔ̀ hɔ́
ɛɲo:bi nɔ tʃ ɹ əo (0.4) ɛɦɛ: nʊ dʲɪɔ: ɦɔ



BO: Nà fà nò sɛ̂ wó né wó pàpá wɔ̀ hɔ̀
na fa nɪ sɛ: wʊ nɪ ʊ papa wɔ ɦɔ



KY: No one teaches (anybody) yes, that's an established fact
BO: Assume that you are with your father ...

In Extract 1 above, the loudness of the turn-occupant's voice increases considerably over the stretch "*-sam*" of "*obonsam*" (devil)

but the loudness associated with the last syllables is pianissimo i.e. so low that perception becomes difficult. The pitch movement associated with the last syllable is falling and the descent in pitch reaches the bottom of the speaker's pitch range. The next speaker treats the relatively low pitch height and falling pitch movement together with the diminuendo loudness as turn-delimitative features and subsequently assumes the position of the turn-occupant as soon as the then current speaker terminates his turn.

In Extract 2 the last few bits of the turn occupant's (KA) stretch of utterance [tʃinsɔ] (Okyinso) is marked with diminuendo loudness, a relatively low pitch height and falling pitch movement. The next speaker (AB) orients to the turn termination done with the above phonetic features and takes up the turn occupancy.

As with Extracts 1 and 2, with Extract 3 a diminuendo loudness and a falling pitch movement are associated with the last three syllables of the turn occupant's stretch of talk [nʊ dᵻɪɔ: ɦɔ |. The next speaker is seen here assuming the position of a turn occupant after the previous turn occupant relinquishes his turn.

What seems rather interesting here is that in all cases such as those cited above and in other similar cases scrutinized in my data, the turn occupants themselves treat the diminuendo loudness, low pitch height and falling pitch movement as turn delimitative by actually giving up the floor whenever their turns are marked with any or both phonetic features (falling pitch and pianissimo or lento loudness) mentioned above.

Local, Kelly and Wells (1986) have also discussed in some detail the use of pitch and loudness in signalling turn delimitation. With pitch, they argue that in Urban Tyneside English there can either be:

(a) a pitch step-up at the end of a turn. Such a pitch step-up, they contend, is usually greater and achieves a higher point than any other pitch step-up in the turn;

or

(b) a drop in pitch on the last syllable of the turn to the bottom of the speaker's pitch range. This is similar to what obtains in my data.

On loudness, they argue that there is a swell — sudden increase and decrease during the ictus syllable of the last foot of the turn.

There is substantial evidence in my data to show that where piano, pianissimo or diminuendo loudness, a relatively low pitch height and a falling pitch movement are associated with a turn-occupant's stretch of utterance and he terminates his turn but the potential next speaker does not take over the turn-occupancy, the turn-occupant shapes his subsequent utterance in a way to portray to the next speaker(s) that he — the turn-occupant — wishes to terminate his turn and that he is only 'forced' to continue due to the potential turn-occupant's refusal to take over. Here it is common to hear the turn-occupant's utterance co-occurring with a relatively low pitch height and piano loudness as well as with markedly breathy voice.

In fact, a long pause which McLaughlin (1984) attributes to the next speaker often obtains between the turn-occupant's intended turn-terminating point and his subsequent onset. The extract below exemplifies the above point.

EXTRACT 4

DA: Enti ɛsɛ sɛ otua yɛn ka. Wo wo Effa, ɛsɛ sɛ aban tua yɛn ka.

DA: So she (the government) has to pay (compensate) us. I am talking to you Effah! She has to compensate us!

In the above, the voice quality associated with the piece stretching from "*ɛsɛ sɛ aban ...*" to "*tua yɛn ka*" is breathy.[1] The stretch

[1]See Obeng (1987) for greater detail.

is also marked with diminuendo loudness and a relatively low pitch height. Moreover, the turn occupant — DA — is seen using direct instruction to invite the next speaker to take over the floor. This situation arose because although the turn occupant stopped speaking after the first piece — "*Ɛnti ɛsɛ sɛ otua yɛn ka*" ('So she has to compensate us') — the next speaker failed to treat the phonetic features associated with the final bits of that piece of utterance as turn-delimitative.

The above discussions suggest:

1. that diminuendo loudness, a low pitch height and falling pitch movement are treated by turn-occupants and their co-participants as turn-delimitative;

2. that if by chance the next speaker does not orient to turn delimitation done with the above phonetic features, the turn-occupant calls the next speaker's attention to it.

3. that following from 1 and 2, loudness and pitch could be said to be valuable turn-regulation signals.

To give a further indication of my fundamental focus, I consider briefly the relationship between overlap and the phonetic features mentioned above. The two extracts below drawn from my data are the subject of the discussion which follows:

EXTRACT 5

DA: ...nè nwómá nà yèdé ákyékyérè sàá pòmá nó hó =
nɪ ŋwʊma nɪɛdɪ atʃtʃ ɹ ɪ sɛpʊma nʊ ɦʊ

KD: = Aàà
à::

DA: Its hide/skin has been used to cover that staff.
KD: Oh I see

EXTRACT 6

KD Mmm asɛm-pa-yɛ-tia [na
m: asɛmpɛːtˢʰia nə

DA: ɛna atuduro nso kura no
ɛna] tˢʰud ɹ o su ku ɹ a nʊ

KD: (Oh, I see) with the *asɛm-pa-yɛ-tia* (a-genuine-story is argued in brief) staff ...
DA: And he holds gun powder ...

A look at the extracts above and other cases of overlap found in my data suggests basically that in most cases of overlapping talk the interrupter's utterance begins at a place where the pitch movement associated with the turn-occupant's utterance is either low-level or falling and the loudness is either piano or diminuendo. This by implication suggests that interrupters treat low-level and falling pitch movements as well as diminuendo and or piano loudness as prospectively turn-delimitative.

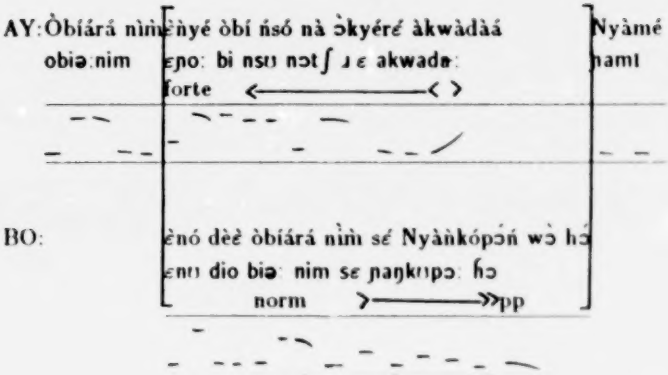
In Extract 5, next speaker (KD) starts in a latch[2] position, thus orienting to the turn-occupant's turn-yielding done with a relatively low pitch height and a falling pitch movement with simultaneous diminuendo loudness.

In Extract 6, the next speaker treats diminuendo loudness and falling pitch movement as turn-delimitative and therefore interrupts the turn-occupant's last syllable. The turn-occupant also treats the above phonetic features as turn-delimitative by giving up the turn. Here it is seen that the degree of loudness and the nature of pitch of the interrupter's speech have a great influence on how long the turn-ocupant holds the floor/turn. In most cases the fading-out is swift when the interrupter's speech is louder and relatively higher in pitch than that of the turn-occupant. In Extract 6, for instance, the interrupter's "within overlap" speech is relatively louder and higher in pitch height than those of the turn-occupant and he — the next speaker — subsequently gains control of the turn. The turn-occupant, as can be seen here, fades out swiftly.

However, where the turn-ocupant intends to stay and fight for the control of the floor, he upgrades. His upgrading may (among other things) involve the use of crescendo loudness and raised pitch. The extract below helps illustrate this point.

[2]KD's turn is juxtaposed to the just completed turn i.e. DA's turn.

EXTRACT 7



AY: Everyone knows (that). Even children know about God's existence.
BO: Everyone knows about God's existence.

In the above example, AY, the turn-occupant, is seen upgrading by raising the pitch of his voice and increasing his loudness and subsequently gaining control of the turn. His post-overlap utterance is marked with diminuendo loudness and a relatively lower pitch height and he is seen terminating his turn — and thus treating diminuendo loudness and a low pitch height as being turn-delimitative.

This turn-occupant's upgrading and other cases of upgrading scrutinized in my data lead me to put forward a second observation stated below:

Forte or crescendo loudness with or without simultaneous raised pitch height or a rising pitch movement (RPM) is projective of further speakership by a turn-occupant. Specifically, I claim that (a) when a turn-occupant reaches a possible turn completion point — a place where he is most likely to be interrupted (or a turn-delimitative point) — he deploys raised pitch and crescendo loudness to hold on

to his turn;[3] (b) the co-participant orients to the turn holding done with the above phonetic features; and (c) the turn-occupant, even when interrrupted, upgrades to win back his turn.

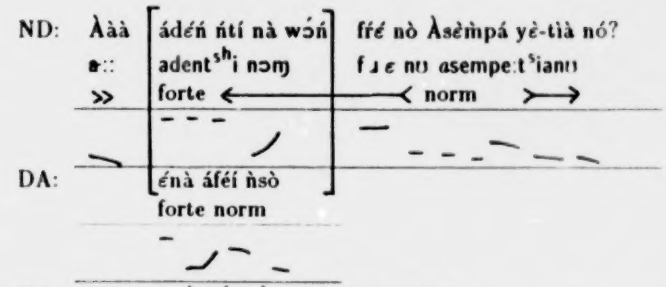
The extracts below help to bear out my claims.

EXTRACT 8

BO: Those stories which glorify the devil; ask those instead
AY: What stories glorify the devil? The truth, truth
BO: Stories which help us.

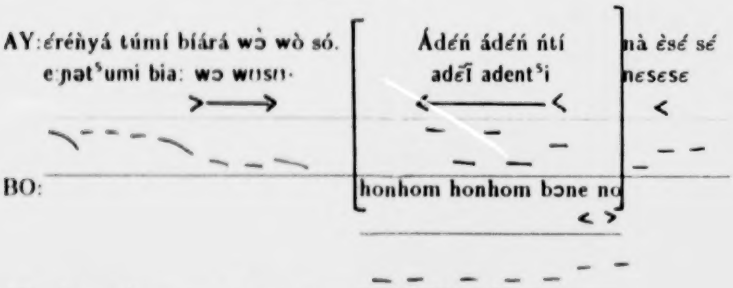
[3]This fact is also mentioned in Levinson (1984).

EXTRACT 9



ND: Oh I see why do they call it *Asempa-yɛ-tia*?
DA: And also
DA: There is one whereby he has made his hands like this.

EXTRACT 10



AY: It can have power over you. Why should it ...
BO: Spirit the bad spirit.

In extract 8 above, BO's turn is overlapped by AY's interruptive talk. Here, the interrupter's — AY's — interruptive talk begins

during the production of the word "*mmom*" — a place which does not suggest itself syntactically as a possible turn-completion point.

What is interesting, though, is that the pitch associated with the last two pre-overlap-onset syllables is relatively low and the loudness is diminuendo. This suggests that the interrupter had been monitoring the turn-occupant's talk for the above-mentioned phonetic features. Specifically, it implies that conversational participants treat diminuendo loudness, low pitch height and falling pitch movement as turn-delimitative. The turn-occupant eventually yields the floor.

The interrupter's within-overlap utterance is heard as being of relatively high pitch height and as crescendo in loudness. This suggests that crescendo loudness and raised pitch are projective of more talk by the turn-holder. This fact is bolstered by the fact that in this same fragment (extract 8) when the new turn-occupant — AY — was interrupted and wanted to re-establish his position as the turn-occupant, he incorporated in his speech crescendo loudness and raised pitch, and by and large won the turn-occupancy.

In extract 9 the turn-snatcher — DA — interrupted the turn-holder at at a point where the pitch of KD's (the turn-holder's) voice had almost reached the bottom of his pitch range and the loudness level of his voice was low (pianissimo).

Sensing the danger of losing his turn, he upgrades. Here it is noted that although the turn-snatcher's loudness and pitch are high, those of the turn-holder are relatively higher.

Realising that the turn-holder has upgraded, the turn-snatcher recoils and thereby empowers the turn-holder to reestablish his position as the real occupant (holder) of the floor.

In extract 10 the interruptive talk begins at a place that suggests itself as a possible turn-ending point. This is because syntactically it is at the end of a sentence (a question) and phonologically the pitch of the turn-occupant's voice reaches the bottom of his pitch range. A diminuendo loudness is also associated with the stretch "*wo wo*

so". The turn-occupant, however, felt that he had something more to say and did not therefore want to lose ownership of his turn. Here it is to be noted that he raises the pitch of his voice, increases the loudness considerably and subsequently reclaims the turn ownership. This supports the claim that crescendo loudness and raised pitch are projective of more talk and that conversational participants monitor each other's speech for the presence or absence of such features. The fact that the interrupter does not continue his utterance to a possible turn-completion point (because of the fact that the turn-occupant's utterance was marked with crescendo loudness and raised pitch) suggests that crescendo loudness and raised pitch are deployed to compete for a turn and are potential floor-winning features.

It is to be noted that where a turn-snatcher interrupts a turn-owner's turn with such features, he drops them as soon as he secures the turn. This observation is similar to that made by French and Local (1985:159) when they remark that conversationalists

> "gauge very precisely both when and how to begin their talk in relation to an ongoing turn."

The above discussion suggests that close and systematic attention to the relationship between overlap and the phonetic features of pitch movement and loudness throw further light on the functioning of turn regulation. It seems clear that crescendo loudness and raised pitch are projective of more talk by a current speaker whereas piano, pianissimo and diminuendo loudness deployed singly or conjointly with a low pitch height or a falling pitch movement are turn-delimitative.

The fact that my findings are more or less similar to those of French and Local (1985) goes a long way towards suggesting that the relationship between turn regulation and the phonetic cues in question is not ethnocentric in favour of Akan or English.

Most importantly, the findings suggest that, like syntax, gaze

and gesture, phonetic cues of this sort have functional relevance in conversational management.

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